



Meeting 2

# Subcommittee 9 Youth

**Chair: Russ Pate**

Members: Chuck Hillman, Kathy Janz, Peter Katzmarzyk, Ken Powell, Melicia Whitt-Glover

# Question 1

- Is there a relationship between physical activity and health outcomes, including weight status/body composition, in children younger than 6 years of age?

# Analytical Framework

## **Systematic Review Question**

Is there a relationship between physical activity and health outcomes, including weight status/body composition, in children younger than 6 years of age?

## **Target Population**

Children, ages 0–6

## **Comparison**

Least active subgroup

## **Intervention/Exposure**

All types and intensities of physical activity, including any kind of play (structured or free), sports, and other activities

# Analytical Framework



## Endpoint Health Outcomes

- Adiposity
- Asthma
- Blood pressure
- Body composition
- Bone, bone mineral content, bone geometry, bone mineral density
- Fatness
- Gross motor movement
- Gross motor skill development
- Growth
- Motor skill competence
- Muscle mass, lean mass
- Musculoskeletal development and fitness
- Physical fitness
- Weight (underweight, normal, overweight, obese)
- Weight status
- Weight trajectory change
- Cardiometabolic risk factors

# Common Inclusion/ Exclusion Criteria

- Language
  - Exclude: Studies that do not have full text in English
- Publication Status
  - Include: Studies published in peer-reviewed journals, PAGAC-approved reports
  - Exclude: Grey literature
- Study Subjects
  - Exclude: Studies of animals only

# Inclusion/Exclusion Criteria



- **Date of Publication**
  - Original Research: Anytime
  - Existing Sources: Include 2006 – Present
- **Study Subjects**
  - Include: Children ages 0–6

# Inclusion/Exclusion Criteria



- Study Design
  - Include: Randomized controlled trials, Non-randomized controlled trials, Prospective cohort studies, Retrospective cohort studies, Case-control studies, Cross-sectional studies, Before-and-after studies, Systematic reviews, Meta-analyses, Time series, PAGAC-Approved reports
  - Exclude: Narrative reviews, Commentaries, Editorials
- Exposure/Intervention
  - Include: All types and intensities of physical activity
  - Exclude: Physical activity not primary exposure variable, Therapeutic exercise

# Draft Search Terms



- Outcomes

- Adiposity
- Asthma
- Blood pressure
- Body composition
- Bone
- Bone mineral content
- Bone geometry
- Bone mineral density
- Fatness
- Gross motor movement
- Gross motor skill development
- Growth
- Lean mass
- Motor skill competence
- Muscle mass
- Musculoskeletal development and fitness
- Physical fitness
- Weight (underweight, normal, overweight, obese)
- Weight status
- Weight trajectory change
- Cardiometabolic risk factors

# Prioritized Questions



## 2. Recent evidence for the effects of moderate-to-vigorous physical activity, vigorous physical activity, and total physical activity of selected types, on health outcomes in youth

- Is physical activity related to cardiorespiratory fitness, weight status, and other cardiometabolic risk factors?
- Does physical activity prevent or reduce excessive weight gain that results in overweight or obesity?
- Are muscle-strengthening and bone-strengthening physical activity related to musculoskeletal health?
- Does recent evidence inform dose-response curves for established associations?

# Prioritized Questions



## 3. Sedentary behavior and health in youth

- Is sedentary behavior associated with health outcomes, including weight status/body composition, in youth?
- Are the effects of sedentary behavior on health outcomes in youth independent of the effects of light, moderate, or vigorous physical activity on those outcomes?

# Areas for PAGAC Input or Discussion



- Physical activity and health in young adults 18-25
- Maternal physical activity and birth weight